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Lead paint poisoning in children

...a problem in your
community ?

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About a year ago in Charleston, South Carolina, a woman with two small children who lived in one of the poorer neighborhoods began to worry because for a couple of weeks the two-year-old had not been his usual self. He was eating poorly and was not as alert and playful as he had been. She took him to the neighborhood clinic, where after a brief examination, the doctors told her there didn't seem to be anything really wrong with him and that he would probably improve in a few days.

A week or two later the child got worse, to the point that he was completely limp when she went to take him out of bed. So she took him to the hospital, where they did a more complete examination and then told her that the baby had a serious case of lead poisoning. They kept him at the hospital and began immediate treatment.

A couple of days later a nurse from the health department came to the mother's home and found that the paint on the interior walls was very old and was chipping and peeling and falling to the floor. The mother told her that she had seen the crawling child eating bits of paint and slapped him for doing it and told him to stop, but admitted that she couldn't watch him all of the time and didn't think eating paint was serious anyway.

After the health department nurse explained to her that eating paint chips was what had made the child sick, she asked the landlord to repaint the inside walls; when he refused, she moved to another house.

The little boy came home from the hospital a couple of weeks later but he had suffered brain damage to the point that he could not talk as well as he had before and no longer had the full use of his arms and legs.

He was so damaged, in fact, that after a few weeks the mother was persuaded to put him into a fulltime clinic for the retarded, where trained people could work to help him recover some of his abilities—even though it was probable that he would never recover completely.

Today, the mother, who during this tragic experience learned a great deal about how lead-paint poisoning can occur among small children, is constantly telling her new neighbors about what happened and how they ought to be trying to avoid the same trouble. She says, however, "they don't seem to understand what I am talking about and I don't think they really believe me."

This is an actual story, typical of the experiences of parents of small children in other cities and not so typical in others. The story does, however, contain all of the elements of a situation that is now a national concern: the unawareness of parents about this danger to their small children, the lack of awareness of many physicians of the need to be on the lookout for lead poisoning, the unwillingness of some landlords to repaint dangerous houses, and finally and most tragically, the permanent effect on many small children when they are exposed to peeling paint too long.

When one reads the evidence that today more than two and a half million children under six years old live in housing where there is the danger of lead poisoning, it is reasonable to ask how and why this situation has happened—and what can be done about it.

This threat to millions of children has been developing through the years from several causes.

Forty years ago all house paint was manufactured with some amount of lead. The addition of lead made the paint dry faster and gave it a shinier and harder finish. In fact, the more lead the better and more expensive the paint, and some paint contained as much as 50 percent lead.

Medical scientists, who had known for many years that lead could be poisonous when it got inside the human body, eventually began to speak out against the presence of so much lead in the everyday living environment of people.

In response, about twenty years ago the paint manufacturing industry agreed to reduce the percentage of lead in paint, especially that used on toys, children's furniture and for interior walls and woodwork.

Although the efforts of many—but not all—manufacturers to reduce lead continued through the years, it was not fast enough to suit many public health officials and other concerned citizens. In 1970 Congress passed the Lead-Based Paint Poisoning Prevention Act; in August of 1972, the Food and Drug Administration issued a regulation directing that beginning January 1, 1973, new paint offered on the market could not contain more than one half of one percent lead. This did not affect, of course, the old paint—some of it over thirty years old—remaining on millions of walls.

Through these same years another widespread change was taking place in our country. After World War II, or beginning about 1947, millions of Americans decided to move to the larger cities and towns, away from smaller towns and farms.



As the cities grew, many people in those cities moved out into the new suburbs, and some of their older houses, which had by now come to be known as "inner city," were occupied by newcomers who simply were unable to satisfactorily maintain the dwellings. This was not true in all cases, of course, but today—twenty years later—the fact is that housing experts estimate about seven million housing units in the nation are in a dilapidated condition.

Translated to our concern about lead-based paint poisoning, this means that a great percentage of those dilapidated housing units have interior walls with peeling paint or they are in such condition that the old paint—many layers of it—can be picked off in flakes or chips if a small child wants to do it.

In some cases, interior walls or woodwork contained as many as ten coats of paint. And the lead content in the early coats is still there.

Although cases of poisoning from eating lead-based paint chips have occurred in all kinds of houses in all parts of the United States, the biggest number of cases are being found in these millions of older houses in the larger cities.

CHILDREN: **How are they poisoned?**

Whether the house is in a large city or a small city or even a town, and whether the paint on the walls is ten years old or thirty years old, the two important factors are the presence of paint that can peel or be picked off and the presence of a small child who can get to the paint.

As the mother in Charleston says, it is hard to stop a child from eating paint if it is available. One physician who has been working on this problem in New York City for years says, "From the hundreds of cases we have seen, we have come to the conclusion that it is just too much to expect that a mother can watch a toddler all of the time. It is impossible for her to do that and get done all of the other things that a mother and housewife has to do."

Some children in the crawling and early walking stage also have what is known as "pica", or a desire to eat non-food substances. Although it is not a disease but a tendency, the result is the same; they just want to put almost anything they can pick up in their little mouths. And unfortunately paint chips have a sort of sweet taste, making them more attractive than some other things around.

Putting these two factors together—the inability to watch small children all of the time and their possible inclination to eat non-food substances, it is reasonable to say that even if all of the babysitters—mothers, fathers, brothers, sisters and friends, KNEW about the dangers of eating paint chips and did a good job of supervision, they still wouldn't be able to prevent the children from eating, if paint was available. That is why health officials working in the field are emphasizing that the job is to find susceptible children AND remove the hazard from the home.

Scientists have established the amount of lead that a human being can take into his body without harm—very small amounts will go through the body and out again. But a paint chip the size of a fingernail contains almost 100 times the amount that should be consumed in one day. If a child eats an average of three fingernail size chips a day for several months that is enough to cause sufficient lead to accumulate in the body to make that child sick. And lead is accumulative; the more the child eats the more serious the effect.

What is being done?

Health officials recognized years ago that any serious attempt to do something about this problem would require an organized effort to find those dwelling places where paint was peeling and children were living, to set up clinics where suspected children could be tested and to persuade parents to bring the children there, to be sure that children were treated when it was necessary, and to make the living places safe for the future.

Some cities, Chicago and Philadelphia, for example, have had organized programs in the Health Departments and Housing Offices for at least five years.

When Congress passed the Lead-Based Paint Poisoning Prevention Act in 1970, it enabled the Federal government for the first time to give active assistance to many cities ready to begin an effort to find and treat children with high blood levels of lead.

Under this Act, the Department of Health, Education, and Welfare's Bureau of Community Environmental Management has provided funds to 40 cities to start or expand efforts to prevent lead-based paint poisoning.

These cities, large and small, and in all parts of the United States, range from New York and Los Angeles, where there are hundreds of blocks of dilapidated housing, to smaller towns

like Nashua, New Hampshire, where the task of finding susceptible children and correcting the housing problems are somewhat different.

In addition to the 40 cities which have Federal grant funds, perhaps a dozen others have started programs, either in the Health Department or the Housing Inspector's office or both. And 30 other communities have indicated their desire to start a lead poisoning program as soon as they can generate public and official interest enough to allocate funds.

In the 40 cities with Federal grants, by the end of the first full year of operation of the programs, more than 400,000 children will be screened and tested.

Even more importantly, the experience of the 40 cities—each different in makeup and each approaching the problem differently—will provide lessons of experience that will make the task easier for others planning to start soon.

Some lessons have already been learned. One experienced worker says, "The first thing you need to begin a good program of prevention is a commitment by the community at large to do something about this tragic problem."

This means that the leaders of the community—public officials, health officials, and the civic leaders, as well as leaders of the poorer parts of the community where dilapidated housing usually exists—must be aware of the nature of the problem.

If the awareness is sufficient these are the people who will work to seek the means to do the job; they will help get the funds to organize the workers to find the children, to set up the facilities to test the children, to arrange for necessary treatment and to help correct the dangerous housing conditions.

Getting the word out

Most community programs begin by sending employees of the health department or the housing office into the neighborhoods where dilapidation—and peeling paint—is likely. These employees are usually known as "outreach" workers; in some cases they are volunteers, often people from the same neighborhood.

In a few cases the health departments have asked all city workers who may go into dilapidated neighborhoods for various reasons, like social workers or men from the housing department, to keep an eye out for signs of peeling walls or woodwork.

The problem must be explained to the mother or both

parents of small children. Outreach workers have learned that the process of explanation must be a careful one; they aren't there to scare the daylights out of the parents, and neither can they allow the parents to get the impression that it is being hinted that the parents are not taking good care of the children. It must be made plain that this is a problem recently discovered to be a widespread hazard and that many people of all classes are unaware of the danger.

It must be explained that sometimes loss of appetite or vomiting or general listlessness, which could be taken for a virus infection or upset stomach that will disappear in a couple of days, can really be signs of lead poisoning.

Then the outreach workers must convince the parent to have the child tested. It is not enough to accept the assurance of the parent that he or she will sweep up the paint and keep the house clean from then on. If there is real evidence of peeling paint then it must be explained to the parent that symptoms of illness may not be obvious, that a free blood test is the only way to be sure the child has suffered no damage.

In most cities with active programs special clinics are set up just to do blood tests for lead. In some programs the public health nurses take their testing equipment right into the homes where parents have agreed to have their children tested. And if the first test indicates that the child may have too much lead in the blood, then it is usual to do a second test a few days later to be sure.

During these screening and testing programs, most community efforts have been accompanied by a public education campaign to explain them. Although newspaper publicity, radio and television announcements, and word of mouth efforts do not always reach all of the people that should be aware of the danger, they do help a great deal to make the general public aware of the problem—and experienced workers agree that general public support is important.

These old hands in the lead-based paint program also say that in their experience the support of the general public is always freely given when there is understanding of the problem and of the potential tragic cost to the future of the community's children.

In many cities volunteers—especially teenagers—have been helpful in this aspect of the program. They bring enthusiasm and a commitment that often overcomes difficulties.

In New York City they tell the story of one teenage girl who decided to work on lead poisoning on her own, without

tieing into any organization. She even went to the Health Department's Lead Program and persuaded a physician to come with her to every home on her block. They did find a child with an elevated blood level and the physician quickly put the child under treatment. A housing worker followed with a test of the child's home, but when he found no trace of peeling paint, he closed the book on the case. This didn't satisfy the teenager, so she went back and talked to the child's mother again and got out of her the information that the child was often left in care of her grandmother, who lived in another block. The teenager visited the grandmother and discovered not only that there was peeling paint in this house, but the grandmother also did babysitting for half a dozen other small children. The physician tested these children and found still another case of elevated blood lead.

When the outreach workers, or the nurses, have done their testing and established that a child shows a level of lead in the blood that is higher than normal, they notify the physicians, and treatment of the child can begin immediately.

It is at this point that the true value of screening programs demonstrate their worth. The physicians can explain very simply that the lower the amount of lead in the child's blood, the easier is the treatment. If the child has only a small amount of lead in the blood over the accepted minimum, then treatment is simple; it can probably be done with a few visits to the clinic. If the amount of lead is higher the child may have to be hospitalized for a few days. If it is very high, then a couple of weeks of hospital treatment may be necessary.

The point to be made clear, the physicians say, is that the quicker they find the child who has been eating paint chips the better; the sooner they can begin treatment the greater his chances of total recovery.

The housing aspect

In addition to finding and treating the child, the other side of the prevention program is equally important—eliminating the old peeling paint in his environment.

When outreach workers find a child with a high blood level and get him under treatment, their next step is to notify the housing office. An inspector from the housing office visits the child's home to check the dwelling for a determination of whether or not the peeling paint is in fact the cause of the child's illness. Their usual method is a meter that can be placed up against the interior wall to measure the amount of

lead in the paint.

If the paint is not the cause they can begin other steps to find out what is; but if peeling paint is the cause, then they can help with suggestions about specific steps to eliminate the paint hazard; the child will no longer be subjected to the danger.

In the great majority of cases where children had high blood levels, the family lived in rented housing. The means and methods for persuading the landlords to remove the dangerous paint and repaint vary widely from city to city—and are a major consideration for any city planning to begin a campaign.

Some cities and towns have ordinances to force the landlord to remove the hazard upon certification by the housing authority. In others, the health or housing department must go to court to force repairs. In still others, the health department has asserted such a strong, moral position about the removal of health hazards to small children that the landlord usually complies—even without the authority of an ordinance.

Each city planning a lead-paint campaign must be knowledgeable about the specific legal authority it has to work with before the campaign begins. In any case, they must reckon with the probability that landlords are not eager to spend maintenance money that they can avoid.

The Director of Housing for the City of Chicago, which has had a very active program for five years, estimates that if the repainting of a house is done by a contractor the cost averages \$400 a room, which includes scraping off all of the old paint and completely repainting. In other cities the estimates are about \$200.

THE HOME:

What can parents do?

It is here that campaign leaders in many cities and in the Federal effort hope that they can have a real effect with a strong educational campaign—with emphasis on the word “prevention.”

Even if the child is tested and found to have a low level of lead in his blood, and even if there is very little peeling paint in his house, there is a great deal that the mother, or both parents, can do to assure themselves that their child will always be safe.

At the very least, the mother or the babysitter ought to keep the floor swept clean all of the time, so that there is no possibility the child can find stray paint chips.

Next, she ought to look around to find paint that *might* be pulled off by her child and then either brush the loose paint off with a broom or a strong brush.

If she can go further, she and her husband can sandpaper or scrape down the walls to get off all old paint. Even if they do not believe they can manage to repaint with unleaded paint any time soon, the child is better off picking at bare woodwork than picking at old paint.

If they can, of course, they ought to repaint the interior walls and woodwork with lead-free paint—but not until the old paint is off. There is no point in repainting with new paint on top of old paint; the new paint can still peel and the old paint is underneath and available to the child.

If parents cannot repaint all of the interior walls, they ought to repaint up at least four feet from the floor, which is as high as a toddler can reach. But in that case they ought to be sure to make a regular check on the walls above the four-foot level to be sure that peeling paint is not dropping to the floor from that level.

In the months and years ahead, cities who plan to begin campaigns to prevent lead-paint poisoning will be able to get technical help, even if Federal funds for the whole campaign are not available. For example, the Department of Health, Education, and Welfare has established a National Clearinghouse on Lead-Paint Poisoning Prevention in the Health Services and Mental Health Administration in Rockville, Maryland.

The Federal government is also doing research to improve and simplify screening and testing methods, treatment methods, and other aspects of the whole effort.

But the 400,000 children that have been screened and tested, and the many thousands that have been given treatment, are only the beginning of the job to be done. Last year it was estimated that 600,000 children showed blood containing too much lead; 125,000 of these may have had lead poisoning. And about 6,000 suffered neurological effects, including mental retardation, like the child in Charleston.

Public health workers in the Federal government, the State governments and in hundreds of cities and towns are conscious that the problem is clearly visible, that the methods for elimination of this threat are available, and that the goal is clear. All we need to do is commit ourselves to what is necessary to protect the lives and health of these small children who cannot do for themselves.

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